

8EHQ-1003-15443

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October 6, 2003

Document Processing Center
EPA East (Mail Code 7407M)
Attn: TSCA Section 8(e)
U.S. Environmental Protection Agency
1201 Constitution Avenue, NW
Washington, DC 20460-0001

Contain NO CBI



Dear Madam or Sir:

Enclosed are summaries of 43 toxicology studies conducted by or for Degussa AG in Germany. These summaries reflect the results of one or more studies conducted on each of 21 chemical substances. Twelve of the summaries include information which we are reporting pursuant to Section 8(e) of the Toxic Substances Control Act (TSCA). The remaining nine studies include information that suggests that the test substance may cause adverse health or environmental effects at high exposure levels. However, because these substances are manufactured or imported in the United States only in limited quantities for use as intermediates in chemical synthesis, they do not currently present a substantial risk to health or the environment. We are therefore submitting them to EPA on a "For Your Information" basis.

These 21 summaries are being submitted pursuant to a data review that Degussa is conducting in connection with its implementation of a new computer system that will permit Degussa Corporation in the United States to access data previously available only to Degussa AG in Germany. Recognizing that a large number of these studies might need to be reported under TSCA 8(e), Degussa proactively contacted EPA in mid 2002 and proposed to review the studies in batches and submit any 8(e) reportable data to EPA within 15 business days (now 30 calendar days) of completing its review of each batch. Degussa estimated that the review would take approximately six month to complete. In a memorandum received in November 2002, the Agency concurred in this approach.

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These studies were made available to Degussa Corporation in April 2003. Degussa's toxicologists in Germany have reviewed more than 750 studies on approximately 100 chemical substances and prepared English summaries of the results of 70 studies for evaluation by scientists in the United States for reporting under TSCA Section 8(e). This submission represents Degussa's review of this first batch of studies by our scientists in Germany and the United States, which was completed on September 12, 2003. Degussa has determined that approximately 1500 studies remain to be reviewed. As we have separately informed Ms. Ann Pontius of the Toxics and Pesticides Enforcement Division, we estimate that the review of the remaining studies will take an additional nine months to complete. We will continue to submit reportable and FYI studies to EPA as our review of subsequent batches is completed.

We appreciate your attention to this matter and request your comments regarding the approach we have taken. Please do not hesitate to call me at (973) 541-8047 if you have any questions or wish to discuss this matter further.

Best regards,

A handwritten signature in black ink, appearing to read "Shaun Clancy".

Shaun F. Clancy, Ph.D.

Memo

To: File
From: Shaun Clancy
CC:
Date: 10/06/03
Re: TSCA 8(e) Review – 111-85-3

Four endpoints were provided by Fine Chemicals for 115-85-3 n-Octylchloride

- Acute Daphnia Tox
- Acute Fish Tox (Golden Orfe and Brachydanio rerio)
- Acute Algal Tox

This chemical is used as an intermediate in organic synthesis and is not expected to be used in a way such that human exposure outside of an industrial setting will occur or that an environmental exposure will readily result. Appropriate Personal Protective Equipment is specified in the MSDS as are warnings not to allow the substance to be released. When used correctly the risk for human and environmental exposure is minimal.

The results of the acute daphnia study indicates a level of toxicity that is considered to be high. Even though the use pattern suggests the possibility of exposure is low these results satisfy the TSCA 8(e) reporting criteria and will be reported. The results of the acute fish tox studies indicate a level of toxicity that is considered to be moderate. Given the use pattern of the substance the results are probably not reportable under TSCA 8(e). The results will be submitted on an FYI basis. The algal tox study indicates that toxic effects are not observed even at the solubility limit of the test substance. The report will not be submitted.

Contains No CBI

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Fax

To: **Shaun Clancy
S-SR-US-EHS**

Fax-No. Recipient: **001-973 541 8040**

Pages (total): **11**

cc: **Dr. W. Mayr/FC-TME-CSM**

**Initial notice of Information for possible TSCA 8e submission
n-Octylchloride, CAS No. 111-85-3**

Dear Shaun,

please find attached data obtained for the above mentioned substance for assessment of possible TSCA reportability depending on the exposure situation.

I am at your disposal for any further questions.

I attach a short summary of the data together with the English summary of the reports or a Translation of the German summary and results part of the report in the case of report No. 84-0382-DKO.

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**Fine chemicals
Chemicals Safety
Management**

FC-TME-CSM/Dr.Jbi/sch

June 23, 2003

Best regards

Sylvia Jacobi
Sylvia Jacobi

degussa.

**Initial Notice of Information to be assessed for Possible TSCA,
Sec. 8e Reporting**

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Fine chemicals
Chemical Safety
Management

June 23, 2003

Name / Trade name of the Substance	n-Octylchloride
CAS-No.:	111-85-3

Human Health Effects

Environmental Effects

Degussa-Study-No.:	95-0314-DGO 96-0252-DGO 84-0382-DGO additional information: 92-0442-DGO 96-0172-DGO 96-0250-DGO
Other Source of information:	

Summary of Adverse Effects:

Environment

Source, Degussa AG unpublished report No. 95-0314-DGO

Guideline: EC Dir. 92/69/EEC, 1992, GLP

Acute toxicity to Invertebrates (Daphnia magna)

EC₅₀ (swimming behaviour): 0.76 mg/l, 48 h

Source, Degussa AG unpublished report No. 84-0382-DKO, summary report of raw data

Guideline: DIN 38412 part 15, non GLP

Acute toxicity to fish (Leuciscus idus melanotus; golden orfe)

LC₅₀: 12.4 mg/l, 48 h

The test was performed using a solubiliser.

Additional Information:

Source, Degussa AG internal report No. 96-0252-DGO

Guideline: EC Dir. 92/69/EEC, GLP

Acute toxicity to algae: Scenedesmus subspicatus

Cell growth (biomass)

E_bC₅₀ : > 0.32 mg/l, 72 h

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Page 02 of 02

Growth rate:

E_{C50}: > 0.32 mg/l, 72 h
NOEC ≥ 0.32 mg/l, 72 h

The highest obtainable concentration due to the limited solubility in the test medium did not result in an inhibitory effect on the growth of algae.

Source, Degussa AG unpublished report No. 96-0250-DGO

Guideline: EC Dir. 92/69 C1/EEC, GLP
Acute toxicity to fish (Brachydanio rerio)

LC₅₀ > 1.7 mg/l, 96 h

The highest obtainable concentration due to the limited solubility in the test medium did not result in acute toxicity to fish.

The study suggests that the test substance is of moderate concern for the environment. Furthermore a calculation of the octanol-water partition coefficient with a log Pow of 5.49 (Degussa AG, unpublished calculation report, Reg. No. 2000-0164-DKB) indicates a theoretical potential for bioaccumulation and a modified Sturm test according to OECD 301 B indicated low biodegradation rate 11% after 28 days with a starting concentration of 10 mg/l and 1% after 28 days with a starting concentration of 20 mg/l.

As the calculated log Pow is 5.42 the substance has a theoretical potential to bioaccumulate. In a modified Sturm test for ready biodegradability the test substance was not readily biodegradable (5% after 28 days with a test substance concentration of 23 mg/l). (Degussa AG unpublished report No. 96-0172-DGO).

Nature and Extent of Risk Involved:

Risks of toxicity and possible accumulation in the environment depending on the exposure situation. The toxicity to Daphnia magna was below 1 mg/l. Acute toxicity to fish and growth inhibition to algae was not observed up to the solubility limit of the test substance. When a solubilizer was used the substance was of moderate toxicity to fish.

Information by	Date:
Dr. Sylvia Jacobi, FC-TME-CSM	June 23, 2003

Translation: Degussa AG Reg No. 84-0382-DKO p. 1 and 4

Page 1:

Testprotocol No. 251 F

Test	Fishtest
Guideline	DIN 38412 Part 15
Study director	Dr. Scheubel
Deputy study director	Dr. Schöberl
Test conducted by	Pommer
Responsible Technician	Pommer
Quality assurance	Dr. Bork

Test Substance:

Name	n-Octylchloride
Chemical name	n-Octylchloride
Composition	
Vapour pressure	
Color	Colorless
Odour	Organic
Stable until	
Stock solution	10000 mg/l
Solubilizer	Marlowet EF 4:1
Handling of the test substance	Following general laboratory guidelines
Origin of test substance	CWH
Batch No.	
Stability in water	stable
Water solubility	unsoluble
Sample No.	
Precipitation/turbidity	turbid

Test organism:

Strain	Idus melanotus
Origin	Eggers
Age	< 1 year
Physiological condition/health state	Losf. (?) factor: 0.8
Treatment	Zephirol 1 : 50000
Feed	TetraMin
Adaption in	Tap water
Time	> 14 days
Test room	Bach 9015 Zi. 1

Translation Translation: Degussa AG Reg No. 84-0382-DKO p. 1 and 4

Page 4:

Testprotocol No. 251 F

Evaluation

Method: graphic

Date: 16.4.84

Concentration mg/l	8	10	13	16	20	25
% dead / % inhibition	0	40	70	80	70	100

Result:

LC_0 : 8.0 mg/l

LC_{100} : 19.0 mg/l

LC_{50} : 12.4 mg/l

Evaluation performed by: Pommer

Date: Technician: Signature

Date: Study director:

SG 0252 DGO

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A b s c h l u ß b e r i c h t

AW - 422

Bestimmung der Auswirkungen von

OCTYLCHLORID

auf das Wachstum von Scenedesmus subspicatus 86.81. SAG
(Algenwachstumshemmtest nach Richtlinie 92/69/EWG)

Auftraggeber: D.I. Lange
GBF ZP P 12
Hüls AG
45764 Marl

Der Unterzeichner erklärt, daß die im folgenden Bericht beschriebenen Versuche unter seiner Verantwortung nach den Grundsätzen der Guten Labor Praxis (GLP) entsprechend dem zur Zeit gültigen Chemikaliengesetz durchgeführt wurden und die Ergebnisse den Verlauf der Prüfung vollständig wiedergeben.

Marl, 21.3.96



.....
Dr. N. Scholz (Prüfleiter)

Der Abschlußbericht umfaßt 19 Seiten.
AWA422Fo

Abschlußbericht Algenwachstumshemmtest

nach 92 / 69 / EWG

AW 422

Seite 5 von 19

Summary**Test substance** : OCTYLCHLORID**Test organism** : Scenedesmus subspicatus**Test type** : Algal growth inhibition test
according to 92/69/EECResults

Within the highest concentration which could be obtained under the conditions of the test * no effect could be observed, thus

On the basis of cell growth, a mean effective concentration can be calculated to

$$72 \text{ h } E_{50} C_{50} : > 0,32 \text{ mg/l.}$$

On the basis of the growth rate, a mean effective concentration can be calculated to

$$(0 - 72 \text{ h}) E_{50} C_{50} : > 0,32 \text{ mg/l}$$

The NOEC value is

NOEC : $\geq 0,32 \text{ mg/l}$
(based on cell growth)

All concentrations are based on OCTYLCHLORID.

* highest concentration ----> 0,32 mg/l

hüls**96 0250 JGO**

Hüls Aktiengesellschaft
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Tel.: 0 23 65/49-26 63
Fax : 0 23 65/49-60 50

A b s c h l u ß b e r i c h t**FK 1346**

**Bestimmung der akuten Wirkungen von
OCTYLCHLORID****gegenüber Fischen
(nach EG 92/69 C 1)**

Auftraggeber: D.I. Lange
GFB ZP P12
Hüls AG
45764 Marl

Der Unterzeichner erklärt, daß die im folgenden Bericht beschriebenen Versuche unter seiner Verantwortung nach den Grundsätzen der Guten Laborpraxis (GLP) entsprechend dem zur Zeit der Prüfung gültigen Chemikaliengesetz durchgeführt wurden und die Ergebnisse den Verlauf der Prüfung vollständig wiedergeben.

Marl, 27. 1. 96


.....
Dr. N. Scholz (Prüfleiter)

Der Abschlußbericht umfaßt 13 Seiten.

Abschlußbericht für Fischtest akut, Kurzzeittest nach EG 92/69 Cl	FK 1346
	Seite 5 von 13

Summary

Test substance : OCTYLCHLORID
Test organism : Brachydanio rerio
Test type : Acute toxicity 96 h LC₅₀
Test conditions : Semi-static test
according to 92/69/EEC; part C 1

Results

Within the highest concentration which could be obtained under the conditions of the test * no mortality could be observed, thus

96 h LC₅₀ > 1,7 mg/l

All concentrations are based on the substance.

* highest concentration under test conditions is 1,7 mg/l

Kopie
entspricht
Original

18.12.95 Be

Hüls Aktiengesellschaft
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A b s c h l u ß b e r i c h t

DK - 667

Ph.3

Bestimmung der Auswirkungen von

OCTYLCHLORID

auf das Schwimmverhalten von Daphnia magna
(nach EG-Richtlinie 92/69/EWG)

Auftraggeber: D.I. Lange
GFB ZP P 12
Hüls AG
45764 Marl

Degussa-Hüls AG - REG-Nr.

95 - 0314 - D60

Der Unterzeichner erklärt, daß die im folgenden Bericht beschriebenen Versuche unter seiner Verantwortung nach den Grundsätzen der Guten Labor Praxis (GLP) entsprechend dem zur Zeit gültigen Chemikaliengesetz durchgeführt wurden und die Ergebnisse den Verlauf der Prüfung vollständig wiedergeben.

Marl, 4.12.95

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Dr. N. Scholz (Prüfleiter)

Der Abschlußbericht umfaßt 16 Seiten.

DKA007.BW

7212 7K → DOK

Wf

Abschlußbericht für Daphnia magna	DK - 667
Kurzzeittest nach EG 92/69/EWG	Seite 5 von 16

Summary

Test substance

: OCTYLCHLORID

Test organism

: Daphnia magna (Clone 5)

Test type

: Acute toxicity 48 h EC₅₀
(Immobilization)

Test conditions

: Static test corresponding to EEC
specification 92/69/EEC

Results

:

24 h EC₅₀ = 0.79 mg/l

48 h EC₅₀ = 0.76 mg/l

After exposure for 48 h, the highest concentration at which no immobilization ($\leq 10\%$) occurred was 0.58 mg/l.

After exposure for 48 h, the lowest concentration at which 100 % immobilization occurred was > 0.81 mg/l.

All concentrations are based on Octylchlorid.